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### REMARKS

1. Claims 1-21 are pending in the present application.
2. In Section 1 of the Action, the Examiner rejects claims 1-5, 9-11, 15-17 and 19-21 under 35 USC § 102(b) as being anticipated by U.S. Pat. No. 5,757,323 to Spencer. The Applicants respectfully disagree.

#### Claim 1

The Examiner states that Figs 1-4 disclose: "a central dielectric portion (along portion 5 at reference center 7, best seen in figure 4) having a first side and a second side opposite the first side". Where is this central dielectric portion that the Examiner is talking about? The Examiner says that it is along portion 5 at reference 7. Figs 1-3 provide no support that there is a central portion. On Figs 1-3, portion 5 is described as a tapered dielectric rod section. See Spencer, col. 2, line 17. Reference 7 is not the physical center of rod 3 or the dielectric portion 5. Rather it is the phase center of the guide rod. See Spencer, col. 2, lines 18 - 20. A phase center is not the same as a physical central portion as the phase center may shift. Nowhere is there an actual disclosure of a "*central portion*." There is no reference to any such central portion anywhere in the specification or the claims. If the Examiner says that there is, he should respectfully state where it is in Spencer.

What the Examiner does say is that this central dielectric portion is "along portion 5 at reference center 7, best seen in figure 4". But, the Examiner "invents" this portion because the Applicants have claimed it. Referring to Figure 4 of Spencer, the Applicants do not see any Reference # 5 listed, so how are they to determine what is supposed to be a "central portion"? There is a Reference 19, pointing to a conical top portion of the guide rod 3, which is described as "the ferrite element 19". But apparently, Reference item 19 is the entire rod, not just the conical shaped tip, as the

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specification says that "a coil 18 is wound around the ferrite element 19" and Fig. 4 shows the coil extending the entire length of the rod that is shown. But nowhere is there a Reference 5 in figure 4.

Further, where does Spencer disclose a "first side and a second side opposite the first side"? Again, all the Applicants can do is refer to Figure 4 of Spencer, but where are the first and second side opposite the first side of this so-called central portion? One can imagine they are supposed to be shown as horizontal lines on guide rod 3 above and below the phase center 7 reference item. But what are these lines supposed to indicate? If they are "sides" where does examiner deduce that? They could be edges where the diameter of the guide rod 3 changes abruptly. If the Examiner claims that they are sides, why does Examiner say they are sides? Apparently, the Examiner does so only because the Examiner knows what the present application claims.

Further, where in Spencer is there disclosed a "second dielectric taper portion" as claimed in claim 1 of the present application? The Examiner says that it is shown by "(the taper ended portion 'un-numbered' inside the tapered portion 4, see figure 4, column 2, lines 14-15) having a second dielectric taper portion proximal side connected with the second side of the central dielectric portion and a second dielectric portion." The unnumbered aspect of the taper end makes it nearly impossible to understand what is shown. The Examiner wants to assert that this is like Applicant's claimed "second portion". But, the Examiner can only do so because he knows what the Applicants are claiming. For example, the Applicants claim that the item has a "proximal side connected with the second side of the central dielectric portion". How do we know that this item has any side? Like the so-called central portion of Fig. 4 of Spencer, could not the line shown on figure 4 be simply an edge? Actually, we don't really know what is being shown.

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Further, unless the entirety of the rod is reference item 19, and not just the upper tip, how do we know that this "unnumbered" portion is just even a dielectric material? Any attempt to make this "unnumbered" item into something is simply an invention by the Examiner.

When the Examiner asserts that the Spencer patent discloses "a first dielectric taper portion proximal side connected with the first side of the central dielectric portion", he identifies it at col 2, line 17, which states, "a tapered dielectric rod section 5". If the first dielectric taper portion is shown by item 5 in Figs 1 -3, where is this item shown on Fig 4? The tapered portion at the top of the guide rod 3 on Fig 4 is called the "ferrite element 19". What portion the Examiner is talking about in Fig. 4? If reference item 19 is the same as reference item 5, where is the central portion to which the first portion is supposed to be connected? Further, where is the proximal side of the first tapered portion? The Examiner has pointed to reference item 5 as the so-called first dielectric taper portion. Where on Figs 1-3 (or Fig 4 which does not identify a reference item 5) is there a "side" with respect to reference item 5?

Therefore, claim 1 is deemed to be novel over Spencer, together with claims 2-5 and 9, at least by virtue of their dependency on claim 1. Additionally, the following is noted about claims 2 and 3.

#### Claims 2 and 3

With respect to plane 8 of the Spencer patent, if Fig. 4 of the Spencer patent is supposed to show the so-called "central portion", where is the "plane" that is supposed to be supporting the antennas? With respect to Figures 1-3, where are the first and second dielectric taper portions? Particularly, where is the second dielectric taper portion? The stated portion of the guide rod 3, below the screen panel 8, of the Spencer patent as shown in Figures 1-3 is the "tubular tapered or conical section 4". But in Fig. 4, reference item 4 is different than the "unnumbered" portion.

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Thus, screen panel 8 of the Spencer patent is not the same thing as the "plane supporting the plurality of wave antennas" as claimed in Applicants' claims 2 and 3.

#### Claim 10

With respect to Applicants' claim 10, the Examiner has all of the problems already shown with respect to claim 1 above. However, the Examiner has now added another aspect to the so-called "central dielectric portion" of Spencer in that it is "acting as a wave guide". Again, the Examiner says that the "tubular guide 5 acts as a waveguide where it directs energy radiated from patch 1 to a secondary antenna such as a lens 22, abstract, figure 3". But, where is the central portion of tubular guide 5? Are we to look to Fig. 4 again? If so, where is tubular guide 5 in Fig. 4? Also, the Examiner asserts that "tubular guide 5 acts as a waveguide". But isn't the wave guide actually reference item 3, which is called the "guide rod" whereas reference item 5 is the "tapered dielectric rod section"? If the Examiner wants to look at the "abstract and Fig. 3, then why does the Examiner not assert that the Spencer "waveguide" is reference item 3? The Examiner does not do so because apparently the Examiner knows that the present application specifically claims that it is the "central portion" that is the waveguide. The Examiner already is stretching to get reference item 5 to have a central dielectric portion in reference item 3. The Examiner would make a different contention if the Examiner indicated that the guide was reference item 3.

Therefore, claim 10 is submitted to be novel over Spencer, together with claim 11, at least by virtue of its dependence on claim 10.

#### Claim 15

With respect to claim 15 and its dependencies, the Examiner makes the same contentions as he makes with respect to the above claims and the same deficiencies with these contentions are noted. Moreover, the

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Examiner again infers from Spencer that both the first and second tapered dielectric elements of the Spencer array have a first and second surface, respectively. Nowhere in Spencer is that surface expressly noted and the Examiner effectively acknowledges that he is making up this surface by stating, "the end portions of the rods forming a uniform planar air surface, figure 1a". Yet, Fig. 1a of Spencer does not show a three dimensional plane and one has to infer that the lengths of the guide rods 3 are such that the ends of the guide rods 3 are linear, let alone planar. Given the fact that the guide rods 3 are adjustable based on the threaded portion 6, it could also be inferred that there is no planar surface on either end of the guide rods 3.

Therefore, claim 15 is novel over Spencer, together with claims 16, 17 and 19, at least by virtue of their dependency on claim 15.

Claims 20 and 21

With respect to Applicants' claims 20 and 21, the Examiner makes the same contentions as with the above claims. Further, except by looking at the drawings and trying to infer limitations from the drawings, where does Spencer disclose a "first dielectric taper portion proximal width", a "first dielectric taper portion distal width", a "second dielectric taper portion proximal width", or a "second dielectric taper portion distal width"?

Therefore, claims 20 and 21 are novel over Spencer.

3. In section 3 of the Action, the Examiner rejects claims 6 and 18 under 35 USC § 103(a) as being unpatentable over Spencer in view of U.S. Pat. No. 6,137,450 to Bhattacharyya. The Applicants respectfully disagree.

Claim 6 depends on claim 1 and claim 18 depends on claim 15. The Applicants have already shown that Spencer does not disclose all of the features of claims 1

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and 15. As a consequence, the Applicants submit that the Examiner has not made a prima facie 35 USC § 103(a) case against claims 6 and 18.

Therefore, claims 6 and 18 are patentable.

4. In section 4 of the Action the Examiner allows claims 12-14. The Applicants acknowledge with gratitude the indication of allowability of those claims.

5. In section 5 of the Action the Examiner states that claims 7 and 8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 7 and 8 depend on claim 1. The Applicants have already shown that claim 1 is patentable over the cited art. As a consequence, Applicants submit that claims 7 and 8 are also patentable without need to be rewritten in independent format.

\* \* \*

In view of the above, the Applicants submit that the application is now in condition for allowance and respectfully urge the Examiner to pass this case to issue.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat

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this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, fax no. (571) 273-8300 on

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